

WE CLAIM:

- Sub  
A1S*
1. A medication pump comprising:  
a cartridge chamber for receiving a medication cartridge, the chamber comprising a first open end for inserting the medication cartridge;  
a pump cap comprising a delivery end, a pump end, and an exterior surface, the pump end configured to rotationally attach to the open end of the cartridge chamber to hold the medication cartridge within the cartridge chamber; and  
a safety cap cover configured to attach to and enclose the pump cap, the safety cap cover being movable from a first state to a second state on the pump cap, wherein the safety cap cover rotates freely around the pump cap in the first state and contacts the exterior surface of the pump cap in the second state.
  2. The medication pump of claim 1, wherein the safety cap cover is moved between the first and second states by applying a radially inward force on opposing sides of the safety cap cover.
  3. The medication pump of claim 1, wherein the safety cap cover deforms to move between the first and second states.
  4. The medication pump of claim 1, wherein the safety cap cover includes an interior surface defining gripping structures.
  5. The medication pump of claim 4, wherein the exterior surface of the pump cap defines gripping structures.
  6. The medication pump of claim 5, wherein the gripping structures of the pump cap comprise ribs of an elastomeric material.

7. The medication pump of claim 1, wherein the exterior surface of the pump cap defines gripping structures.
8. The medication pump of claim 7, wherein the gripping structures comprise ribs of an elastomeric material.
9. The medication pump of claim 1, wherein the safety cap cover comprises a first end, a second end, and a lip protruding radially inwardly from a portion of the first end, wherein the first end is adjacent to the pump end of the pump cap.
10. The medication pump of claim 1, the safety cap cover comprising a first end and a second end, the second end defining an opening, wherein the first end is adjacent to the pump end of the pump cap.
11. The medication pump of claim 1, the delivery end of the pump cap defining an opening.
12. The medication pump of claim 1, wherein the safety cap cover comprises a first end defining an opening and a second end defining an opening, and the safety cap cover defines a passageway extending from the first end opening to the second end opening.
13. The medication pump of claim 1, wherein the pump cap defines an opening at the delivery end, an opening at the pump end and a passageway extending from the delivery end opening to the pump end opening.
14. A medication pump comprising:  
a motor;  
a cartridge chamber for receiving a medication cartridge, the chamber comprising a first open end for receiving the medication cartridge and a second end, the second end defining a drive rod opening;

a drive rod extending into the cartridge chamber through the drive rod opening, wherein the drive rod is configured to be axially moved by the motor;

a pump cap configured to rotationally attach to the open end of the cartridge chamber to hold the medication cartridge within the cartridge chamber, the pump cap comprising a pump end, a delivery end, and an exterior surface; and

a safety cap cover comprising a first end, a second end, and a wall extending between the first and second ends, wherein the safety cap cover is configured to attach to and enclose the pump cap, the safety cap cover being movable from a first shape to a second shape on the pump cap, wherein the safety cap cover rotates freely around the pump cap in the first state and contacts the exterior surface of the pump cap in the second state.

15. The medication pump of claim 14, wherein the safety cap cover is moved between the first and second shapes by applying a radially inward force on opposing sides of the safety cap cover.

16. The medication pump of claim 14, wherein the safety cap cover deforms to move between the first and second shapes.

17. The medication pump of claim 14, wherein the wall of the safety cap cover includes an interior surface defining gripping structures.

18. The medication pump of claim 17, wherein the exterior surface of the pump cap defines gripping structures.

19. The medication pump of claim 18, wherein the gripping structures of the pump cap comprise ribs of an elastomeric material.

20. The medication pump of claim 14, wherein the exterior surface of the pump cap defines gripping structures.

21. The medication pump of claim 20, wherein the gripping structures comprise ribs of an elastomeric material.
22. The medication pump of claim 14, wherein the safety cap cover comprises a lip protruding radially inwardly from a portion of the first end.
23. The medication pump of claim 22, wherein the second end of the safety cap cover defines an opening.
24. The medication pump of claim 14, the delivery end of the pump cap defining an opening.
25. The medication pump of claim 14 wherein the safety cap cover comprises a first end defining an opening and a second end defining an opening, and the safety cap cover comprises a passageway extending from the first end opening to the second end opening.
26. The medication pump of claim 14 wherein the pump cap defines an opening at the delivery end, an opening at the pump end and a passageway extending from the delivery end opening to the pump end opening.
27. A medication pump comprising:  
a cartridge chamber for receiving a medication cartridge, the chamber comprising a first open end for receiving the medication cartridge;  
a pump cap comprising a delivery end and a pump end, the attachment end configured to rotationally attach to the open end of the cartridge chamber to hold the medication cartridge within the cartridge chamber, the pump cap further comprising an inner portion and an outer portion, the outer portion being movable from a first state to a second state with respect to the inner portion, wherein the outer portion rotates freely

about the inner portion in the first state and contacts an exterior surface of the inner portion in the second state.

28. The medication pump of claim 27 wherein the pump cap defines an opening at the delivery end, an opening at the pump end, and a passageway extending between the delivery end opening and the pump end opening.

29. The medication pump of claim 27, wherein the outer portion of the pump cap is moved between the first and second states by applying a radially inward force on opposing sides of the outer portion.

30. The medication pump of claim 27, wherein the outer portion of the pump cap deforms to move between the first and second states.

31. The medication pump of claim 27, wherein the outer portion includes an interior surface defining gripping structures.

32. The medication pump of claim 31, wherein the exterior surface of the inner portion defines gripping structures.

33. The medication pump of claim 32, wherein the gripping structures of the inner portion comprise ribs of an elastomeric material.

34. The medication pump of claim 27, wherein the inner portion includes an exterior surface defining gripping structures.

35. The medication pump of claim 34, wherein the gripping structures comprise ribs of an elastomeric material.

36. The medication pump of claim 27, wherein the outer portion comprises a delivery end, an attachment end, and a lip protruding radially inwardly from a portion of the attachment end.
37. A safety cap cover for a medication pump, the safety cap cover comprising:  
a first end defining an opening,  
a second end defining an opening, and  
a wall extending between the first end and second ends, defining a passageway between the first end opening and the second end opening,  
wherein the safety cap cover is configured to reversibly attach to and enclose a pump cap of a medication pump, the safety cap cover being movable from a first state to a second state on the pump cap, wherein the safety cap cover rotates freely around the pump cap in the first state and contacts an exterior surface of the pump cap in the second state.
38. The medication pump of claim 37, wherein the safety cap cover is moved between the first and second states by applying a radially inward force on opposing sides of the safety cap cover.
39. The medication pump of claim 37, wherein the safety cap cover deforms to move between the first and second states.
40. The medication pump of claim 37, wherein the safety cap cover includes an interior surface defining gripping structures.
41. The medication pump of claim 37, further comprising a lip protruding radially inwardly from a portion of the first end, wherein the first end is adjacent to the pump when the safety cap cover is attached to the pump cap.

42. A method of making a cartridge chamber of a medication pump more difficult for a child to open, comprising:

providing a safety cap cover configured to reversibly attach to and enclose a pump cap of a medication pump, the safety cap cover being movable from a first state to a second state on the pump cap, wherein the safety cap cover rotates freely around the pump cap in the first state and contacts an exterior surface of the pump cap in the second state; and

attaching the safety cap cover to the pump cap.

43. The method of claim 42 further comprising opening the pump cap by moving the safety cap cover from the first state to the second state, and applying pressure to the pump cap through the safety cap cover to rotate the pump cap.

44. The method of claim 43 further comprising moving the safety cap cover between the first and second states by applying a radially inward force on opposing sides of the safety cap cover.